REDEFINE YOUR LIMITS

FLOAT 3 **FACTORY SERIES** OWNERS MANUAL



13461 Dogwood Dr
Baxter, MN 56425
1.800.FOX.SHOX
RIDEFOX.COM

CONTENTS

NOTICE: THE SNOWMOBILE PICTURED IN THIS MANUAL MAY NOT RESEMBLE YOUR ACTUAL SNOWMOBILE THE PROCEDURES OUTLINED IN THIS MANUAL WILL INSTRUCT YOU TO MOUNT, SET-UP AND ADJUST THE FOX FLOAT 3 ON YOUR PARTICULAR SNOWMOBILE MODEL.

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CONGRATULATIONS

Thank you for choosing FOX FLOAT 3 shock absorbers for your snowmobile. In doing so, we believe that you have chosen the finest suspension products in the world.

FOX shocks have been designed, tested and manufactured in the USA for more than 35 years.

As a consumer and supporter of FOX products, you need to be aware of the importance of setting up your shocks correctly to ensure maximum performance. This manual provides step-by-step instructions on how to set-up and maintain your shocks. It is a good idea to keep your proof of purchase with this manual and refer to it for service and warranty issues.

This manual does not contain step-by-step shock rebuild instructions. Rebuilding should be carried out by an authorized FOX service technician.

CONSUMER SAFETY

WARNING: Riding a Snowmobile can be dangerous and can result in DEATH OR SERIOUS INJURY.

Take responsibility for yourself and others seriously, and read the following safety tips:

- Keep your vehicle and its suspension systems in optimal working condition.
- Always wear protective clothing, eye protection and a helmet
- Know your limits and ride within them!

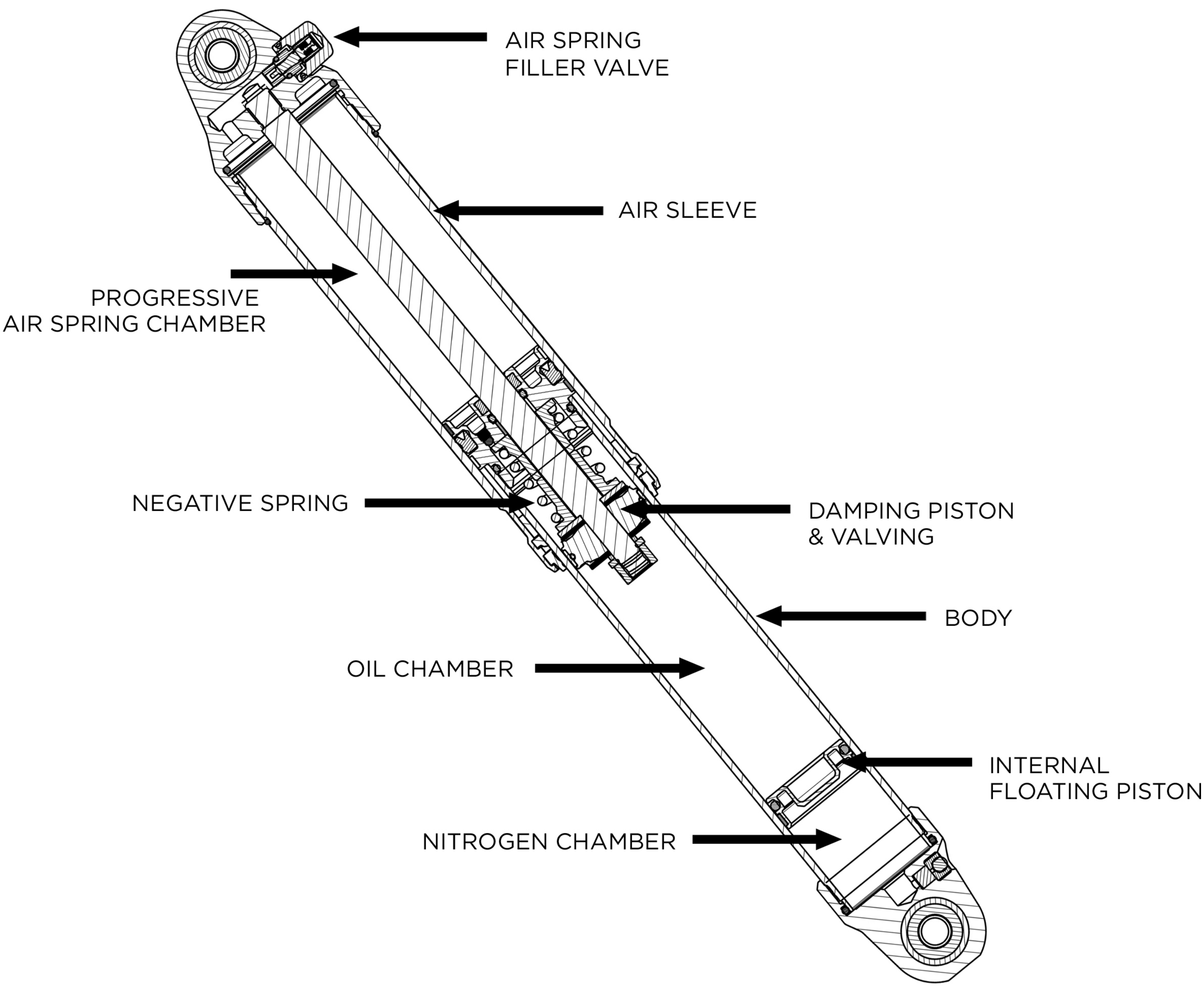
The FOX FLOAT 3 shock contains a high-pressure nitrogen charge. The shock should only be opened by a FOX technician.

WARNING: Opening a nitrogen pressurized shock can be dangerous and can result in SERIOUS INJURY OR DEATH. NEVER attempt to disassemble the damper of your Float 3 shock. Do not puncture or incinerate the shock absorber damper portion. Always wear eye protection when installing or adjusting your shock absorber.

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UNDERSTANDING THE FLOAT 3

FOX FLOAT (FOX Load Optimizing Air Technology) 3 air shocks are high-performance shock absorbers that use air as springs, instead of heavy steel coil springs or expensive titanium coil springs. Underneath that air sleeve is a high-performance, velocity-sensitive, shimmed damping system. FLOAT 3 air shock dampers contain high pressure nitrogen gas and FOX high viscosity index shock oil separated by an Internal Floating Piston system. This helps to ensure consistent, fade-free damping in most riding conditions.



FLOAT 3 shocks are built using 6061-T6 aluminum for light weight and strength. The chromed damper shaft is super-finished for low friction and long seal life. All of the seals and wipers are engineered specifically for FLOAT 3. The damper shaft and seals are contained within the air sleeve, protecting them from dirt, water and ice.

FOX PUMP

Your FLOAT 3 shock absorbers are shipped with a FOX air pump, shown below.



0-150psi Pump P/N 027-00-007

AVAILABLE OPTIONS



Body Guard Kit, black shown, optional colors available

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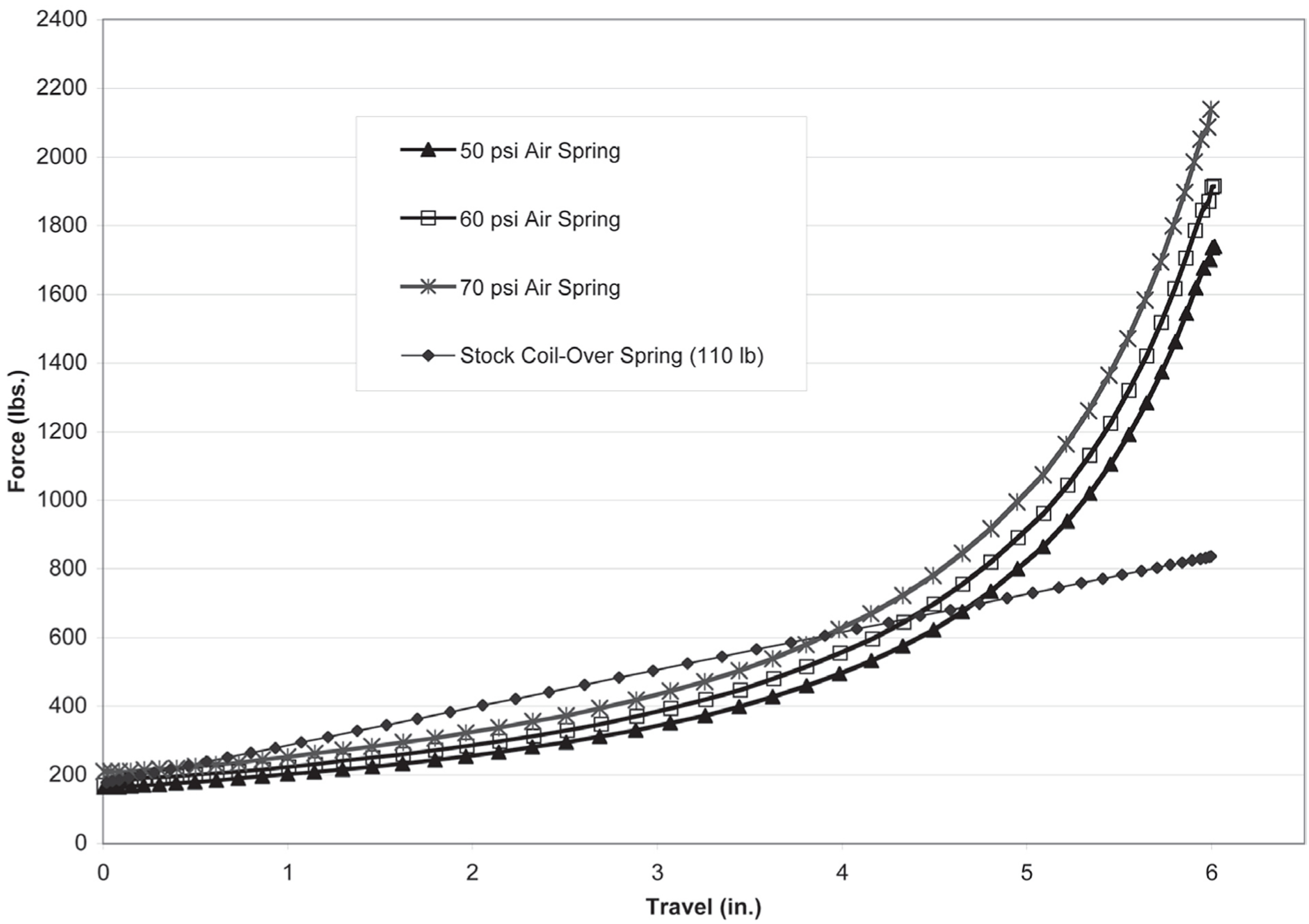
ADJUSTABLE PROGRESSIVE AIR SPRING

Air springs are not just lightweight they are also progressive. What does that mean? As the graph below shows, during the second half of shock travel, the spring force builds rapidly. This virtually eliminates any harsh bottoming of the suspension and provides a “bottomless” feel.

The graph compares the spring forces for three different initial air pressure settings (50, 60 and 70 psi). The progressive air spring pressure is infinitely adjustable (up to a maximum of 150 psi) for different rider weights and terrain conditions using the included FOX High Pressure Pump. The adjustment of the air spring changes both preload and spring rate, making it a much more effective adjustment than preloading a coil spring. This means that air spring pressure adjustments will allow your FLOAT 3 air spring shock to be used in a wide variety of riding conditions without having to buy different rate springs as with a coil-over shock.

The graph also shows a typical stock straight-rate steel coil spring. As you can see, it builds its spring force in a linear straight line. This straight spring rate does not give the progressive bottom-out protection of a FOX FLOAT 3 air shock.

FOX FLOAT 3 PROGRESSIVE AIR SPRING CURVE



TEMPERATURE DEPENDENCY

The air pressures in the FLOAT 3 air shocks are slightly temperature dependent with roughly a 10psi air pressure change over a 100-degree temperature change. Because of this, **it is best to set the pressures in temperature conditions close to the ambient temperature anticipated during riding**. When temperatures change by more than 30 degrees Fahrenheit—or 17 degrees Celsius—it is recommended that the pressure settings be reset.

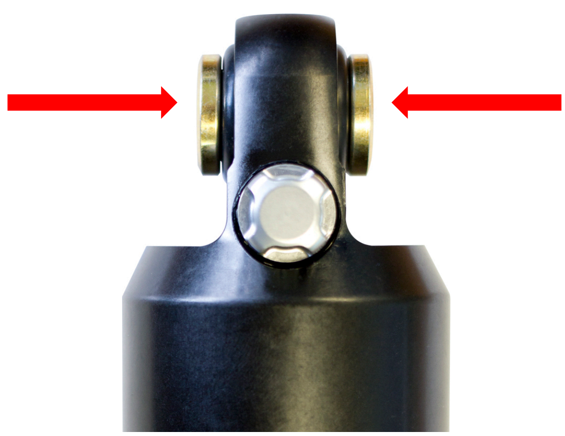
For example, if the temperature outside is 40°F (4°C) and the pressures are set while the snowmobile is in a garage in which the ambient temperature is 70°F (21°C), the shocks will be under-pressurized when taken outside due to the cold air temperature. Therefore, it is imperative that the pressures are re-adjusted when the snowmobile/shocks are taken from extreme warm to cold temperatures and vice-versa. Once the pressures are set for a given temperature, they will remain stable throughout the ride.

REFERENCE AIR PRESSURES

	Air Chamber
Mountain/Backcountry	35-65
Performance/Trail	35-95
Sno-Cross/X-Country	100-120

INSTALLING YOUR SHOCKS

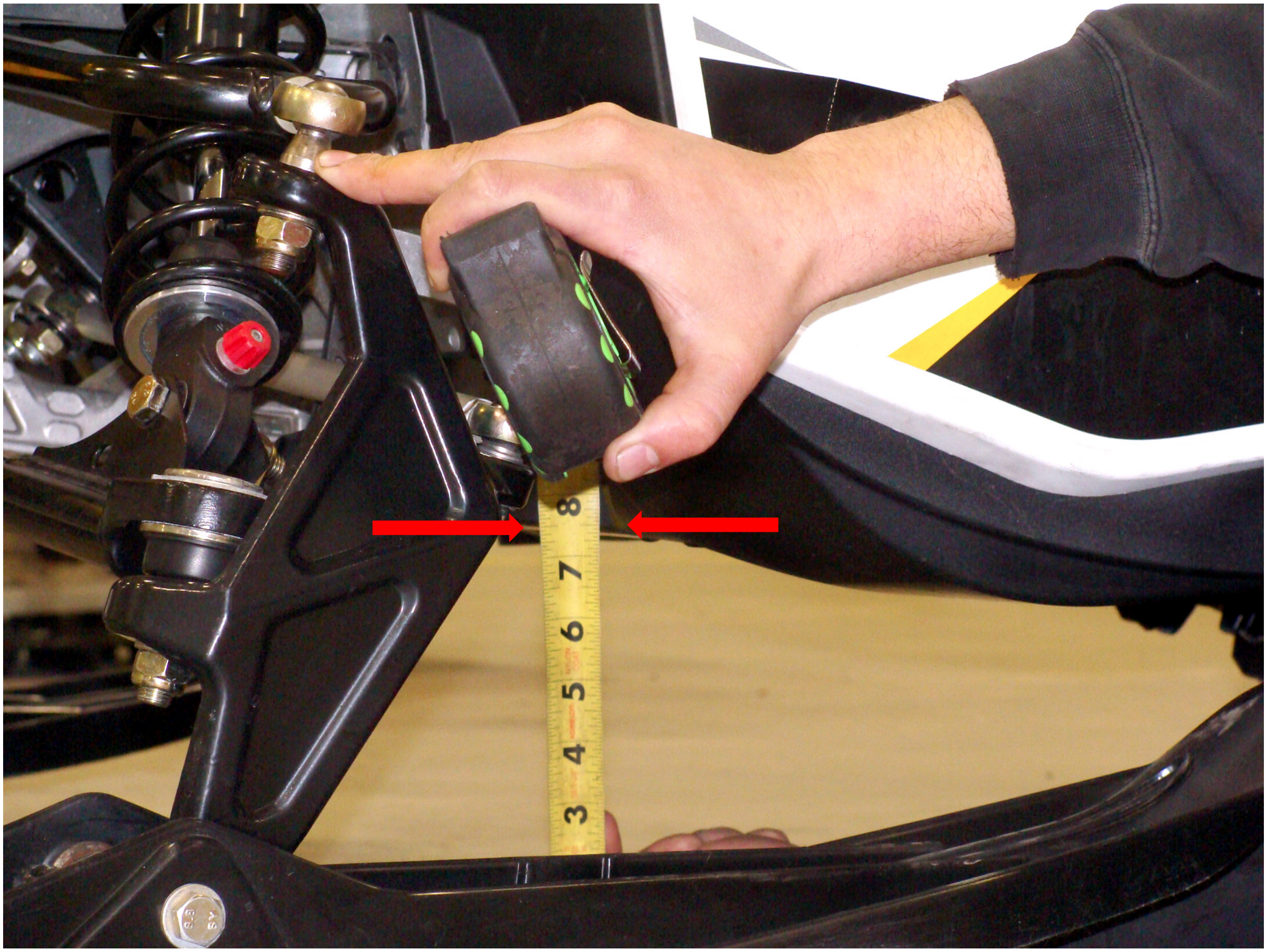
If you do not have the proper equipment, tools, floor jack or jack stand, torque wrench, ratchet socket set with wrench set and abilities to correctly install your shock, have the shock absorbers installed by a professional technician. Your shock absorbers come supplied with the correct reducers pre-installed to mount them correctly to your vehicle.



WARNING: CONTACT FOX IF THESE REDUCERS DO NOT FIT CORRECTLY. CORRECT SHOCK MOUNTING IS CRITICAL FOR CORRECT OPERATION AND FOR YOUR SAFETY.

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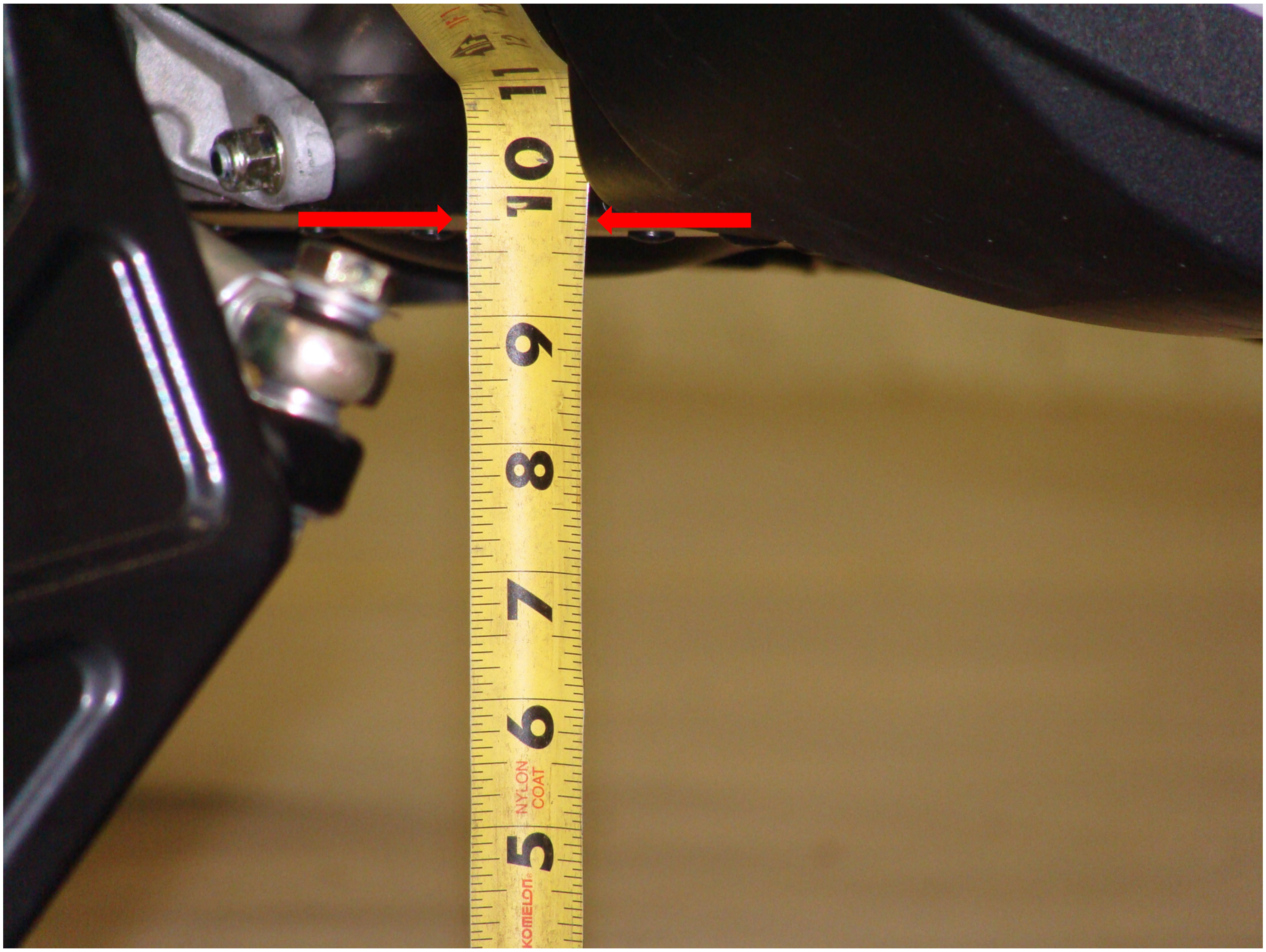
MEASURE STOCK SETTINGS



Step 1 BEFORE REMOVING STOCK SHOCK ABSORBERS

Start with the vehicle on a flat surface. Push down on the front bumper 3 times to set the front end. Measure the ground clearance of stock vehicle with the rider on board from the low point of the chassis. **This will be measurement A = 7.375"** This measurement is known as ride height.

Ride height is measured with the intended rider and gear on board the vehicle when taking the measurement.



Step 2 Raise the front end up until the shocks fully extend or the ski is just about to come off the floor. Re-measure from the previous point on the chassis to the ground. **This will be measurement B (Example 9.750”) Full Extension**

Step 3 **B - A = Sag Example 9.750” - 7.375” = 2.375” of Sag**

Use this measurement to set up your FOX FLOAT 3

Full Extension – Ride Height = Sag

Sag requirement is dependent on your vehicle, rider weight and usage. Sag requirements may vary. Heavier vehicles and riders may require more sag for optimal performance.

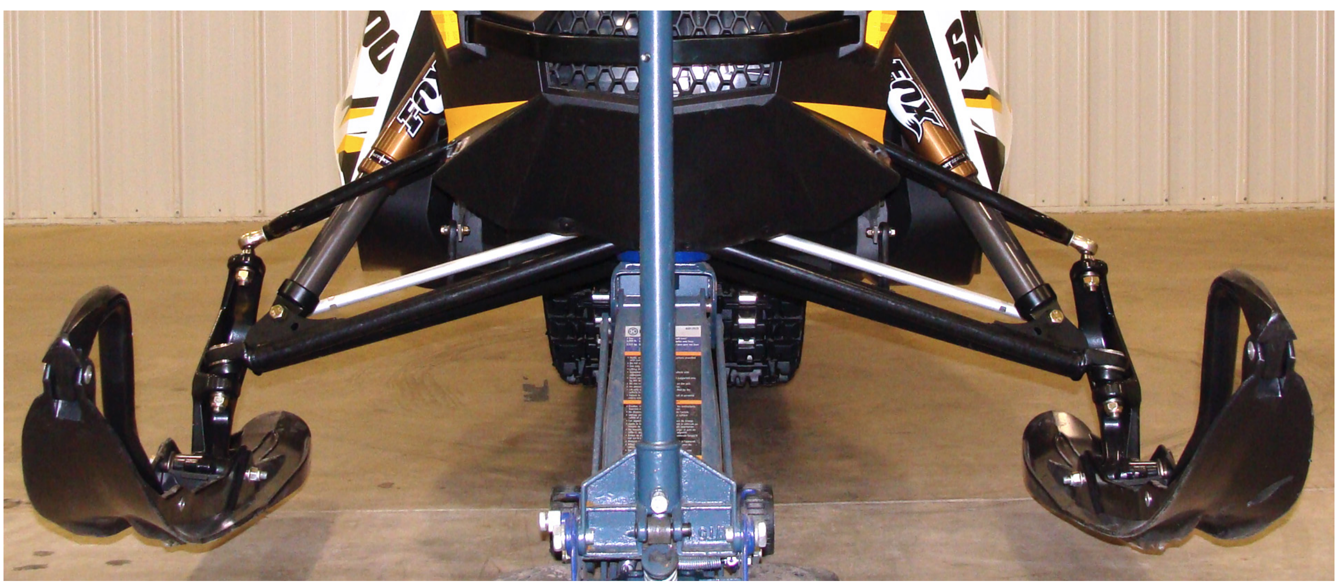
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FLOAT 3 INSTALLATION





Step 1 Ensure that your snowmobile is safely supported with a floor jack or jack stand and the skis off the ground. The suspension should be fully extended before removing the stock shocks. Install your FLOAT 3s with the air sleeve orientated as pictured.



Step 2 Torque the original hardware to manufacturer's specifications. FOX FLOAT 3 shocks air chambers do come pre-pressurized, but it is recommended that you check air pressure on initial setup before riding.

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FLOAT 3 SETUP



Step 1 Ensure that your snowmobile is safely supported with a floor jack or jack stand and the skis off the ground. Remove the air spring filler cap.

Step 2 Thread the pump onto the air filler valve until it is fully seated and air pressure registers on gauge.

NOTE: WHEN YOU ATTACH THE PUMP, THE HOSE AND GAUGE WILL FILL WITH AIR FROM THE AIR CHAMBER RESULTING IN A LOWER AIR PRESSURE READING THAN THE SHOCK WAS ORIGINALLY SET AT. THIS IS NORMAL.

Step 3 Pump the shock up to the desired air pressure setting. You can decrease air pressure by pushing the BLACK-BLEED valve on pump. (WARNING: DO NOT EXCEED 150PSI IN MAIN CHAMBER)
Pushing the bleed valve halfway down and holding it there will allow air to escape continuously from the pump and shock. Pushing the bleed valve all the way down and releasing it will allow only a small amount of pressure to escape (micro-adjust). When unthreading the pump from the Schrader valve, the sound of air loss is from the pump hose only and not the shock. Your shock pressure will not change.

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Step 4 Lower the vehicle to the floor and remove the jack. Push down on the front bumper 3 times to set the front end. Measure ground clearance of vehicle with rider on board from previous measuring point of chassis. This will be measurement C (Example 7.0 inches) Ride Height

Step 5 **B - C = new Sag Example 9.750”- 7.0”= 2.750”of sag**

Step 6 In our example you would have to increase the air chamber pressure to increase ride- height and reduce sag by repeating previous steps one thru four. However if the ride height would have been too high and sag too low, you would have to decrease air chamber pressure.

Full Extension – Ride Height = Sag

Step 7 Replace air spring filler valve caps.

TUNING THE FLOAT 3

SPRING FORCE

At this point you have set the sag of your vehicle by adjusting the air chamber pressure. Your spring force should be near its optimal setting. If you feel that the front of the vehicle is too low as you are riding, increase the air chamber pressure by 5psi. If the vehicle is too high, decrease the air chamber pressure by 5psi.

Step 1 Lift the vehicle’s front end off the ground.
Step 2 Remove air spring filler valve cap.
Step 3 Reset the air pressure in air chamber. (Do not exceed 150 psi)
Step 4 Replace air spring filler valve cap.

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TUNING NOTES

DATE	COMMENTS	FULL EXTENSION	- RIDE HEIGHT	= SAG	AIR PSI

MAINTENANCE

PROPER INSPECTION AND MAINTENANCE IS ESSENTIAL TO MAINTAIN THE PERFORMANCE AND RELIABILITY OF YOUR SHOCK ABSORBERS.

You should keep the shock clean and free of dirt, ice and snow.

It is important to keep the shock absorbers clean and free of residue. The Samurai Sealing System in the air sleeve will clean deposits from the shock body and reduce the amount of debris entering the air sleeve. This will add to main air sleeve seal life. When cleaning the vehicle avoid using a high-pressure washer near the seals as this could drive debris inside the shock air sleeve.

The service interval depends on how frequently and severely the snowmobile is ridden. As a guideline, if you race every weekend, you may want to change the oil in your shock at least once during the season. Otherwise, it is generally recommended to service the air sleeves at a minimum of once per year, with complete shock service every 3000 to 5000 miles. FOX or an authorized factory service center can perform these procedures.

WARRANTY

All FOX products have a one-year warranty on defects in materials or workmanship. Please view the full warranty terms and conditions at **www.ridefox.com Help Center/Powersports/Warranty** or Contact a representative at: 1.800.FOX.SHOX (1.800.369.7469). A service RMA will be issued.

Ship shocks to one of the following service centers:

FOX Powersports Service
130 Hangar Way
Watsonville, CA 95076

FOX Midwest Service Center
13461 Dogwood Drive
Baxter, MN 56425